WHAT ALL WOMEN SHOULD KNOW OF ELECTRICITY

By DE WITT V. WEED, JR., E. E.

Engineering Expert of The Tribune Institute. TO ONE wants to cook over a coal range in hot weather. Fortunately, in this electric age, no housewife is really obliged to broil herself as well as her dinner. Electricity, without heat, dust, ashes or bother, will do it all-provided she has the proper appliances and knows how to manage

The cost of electrical cooking devices ranges from \$3.50 for toasters, flatirons, and such small implements, to \$15 for chafing dishes, portable ovens, etc. The cost of operation ranges from four to six cents per hour when the electric rate is ten cents per kilowatt hour. Electric washing and wringing machines may be purchased from \$50 up and they cost about two cents per hour to use. One may pay as little as \$18.75 for an efficient electric suction cleaner or as high as \$130. The cost of operation varies from one to four cents per hour.

Such common electrical appliances as the toaster, chafing dish, percolator, etc., require a little care in the cleaning. The natural tendency is to immerse the whole article in water. This must never be done. The water coming in contact with the current plug connection pins destroys the insulation and may so affect the heating element (the resistance wire that changes the electricity into heat) as to cause a "short circuit." And also the metallic exterior surface of the device might be electrified on the next using of the article and give the user a slight shock. In some utensils the heating element may be removed, but in general it is necessary to wash out · the interior with care and not let any water come in contact with the outside parts.

WHAT TO DO WITH A BLOWN-OUT FUSE.

When it is desired to turn off the current going to an appliance, unless it is provided with its own special switch, the cord should first be disconnected at the device itself or at the lamp socket. Never turn off by the snap switch of the lamp socket, as it may result in "blowing" a fuse and causing considerable inconvenience, since the average housekeeper or man-about-the-house is absolutely ignorant as to how to replace a fuse.

To do this first locate the fuse box, which is usually placed near the meter. In the case of a house of two or more stories, a panel or fuse box will be found on each floor. Generally the fuses used in a house installation are of the Edison universal screw socket type, that screw into a socket in the same way that an incandescent lamp bulb is affixed. Having located the fuse box, the "blown" fuse will be detected by the discoloration of the mica top or plaster. An examination of this fuse will show that it contained a short strip of wire of certain diameter and current carrying capacity and that, before it became too hot and melted, it was attached to the bottom and upper side of the fuse shell, thereby completing the electric circuit.

The marking appearing on either the top or bottom of the fuse indicates the number of amperes it will safely carry, and it is important that, when replacing, the new fuse should bear the same or a lower number. Should a larger one be used it may happen that an electric device consuming more current than the circuit can safely carry might be operated upon it and the fuse not "blow." Result-overheated wires, broken insulation and a possible fire started in the woodwork or walls.

The purpose of a fuse is to "blow"-or melt



and separate-when a certain current passes through it and thereby break the circuit. The "blowing" indicates that there is either a "short circuit" or that the particular appliance or device in use consumes too much electricity for the circuit, and its operation must be discontinued at once. In other words, the fuse acts as a safety valve. In modern wiring two circuits are installed, one for the lights and the other with sub-base outlets for connecting appliances. This method obviates the inconvenience of going lightless because an appliance has blown the fuse.

Apparatus or machines that are equipped

Cook breakfast at the table in the outdoor dining room and then let the little girls attach their small stove to the switch. Heat the baby's milk, wash dishes and do many other things by electricity. with small motors of high speed, require the average reader or hearer has a very vague periodic oiling, and at least semi-annually and indefinite idea of the meaning of these should be carefully inspected for worn parts terms. Owing to the similarity of the two, that need renewing and thoroughly cleaned, electricity may be likened to water in a pipe. as the accumulation of dust affects efficient The number of volts or electromotive force is the force that tends to make a current of operation. electricity flow through a wire, a lamp or a THE ELECTRICAL CURRENT. motor. It is the pressure, and as we speak of

There are two kinds of electricity-alternating current and direct current. An explanation of the characteristics of each and the difference would involve technical terms, and since either kind acts the same with electrical cooking and heating appliances this knowledge is not essential to the housekeeper.

However, when ordering or purchasing a machine that uses an electric motor always learn from the office of your electric lighting company the voltage and kind of current supplied to you.

The words "volt," "ampere" and "watts" frequently occur in speaking of electricity, but

the water supply pressure at the faucet being thirty-five or fifty pounds, etc., so with electricity we speak of the pressure as 110 or 120 volts, etc.

The ampere is the unit of rate of flow and may be likened to the cubic feet per second, or gallons per minute, of the water supply and designates the volume of the stream with respect to time. In a water system the size of a stream may vary with the pipes, while with electricity the number of amperes denotes the size. Thus an electric iron, toaster etc., requires a medium sized stream-five amperes; a suction cleaner, washing machine, etc.,

a small stream-one to two amperes; while a heater, range, etc., takes a large stream-ten or more amperes.

CLEMENT

Thus the electric lighting company determines the voltage or pressure, while the manufacturer regulates the size of the stream or amperage required by his appliance.

HOW MUCH ARE YOU USING?

The "watt" is the unit of power and denotes the rate of work. In the case of water, this work is indicated by gallons per minute, with the resistance to flow taken into consideration, while with electricity we would say so many watts was consumed. The unit watt is approximately the product of the volts and amperes and is supplied to the consumer on a time basis-kilowatt-hour or 1,000 watt-

For example, if an appliance taking five amperes (the ampere is usually stated on the name plate) was used on a 110-volt circuit the power consumed would be 110 times 5, or 550 watts. Now, a kilowatt is 1,000 watts and a kilowatt hour is 1,000 watts being used for one hour or any equivalent rate, such as 500 watts for two hours, or 400 watts for 21 hours. In the case taken, the appliance would consume .55 of a kilowatt and as the rates charged for electricity vary from 1 to 20 cents per kilowatt-hour, the cost of one hour's operation would vary correspondingly from one-half cent to 11 cents, depending

upon the rate being paid. Oftentimes a house owner considers installing electricity in the home for lighting etc., but hesitates about taking the actual step because of the uncertainty of just how high the monthly bill will run. In consideration of the improved illumination, using electricity for lighting is a good investment when the rate is ten cents or less per kilowatt-hour,

Cooking entirely by electricity is too expensive unless the rate is less than five cents per kilowatt-hour, but the occasional use of the small cooking appliances will be found a convenience and economy even at higher

We hear on occasions of electricity consumers complaining of a sudden increase in their monthly bills, due to no apparent reason on their part. It may be due to some member of the household's carelessness in the use of the current, faulty wiring, or to the inaccuracy of the meter. "Creeping" may have developed. That is, the registering device records the consumption of current when none is being used. If this is the trouble, it can be easily determined where the meter has a glass front by first making sure that no lights or appliances are being used and then observing the metal disc inclosed in the glass case and noting whether it revolves. Of course, this observation must be made when electricity is being supplied by the lighting company, and should any steady movement of the disc be noted the matter should be reported to the local lighting officials so that it can be investigated, as occasionally imperfect insulation in the wiring, especially around the fixtures, will furnish a "ground" by which current will leak and cause this "creeping" of the meter.

WHEN AN EGG IS NOT AN EGG



HE Bureau of Chemistry down Washington is the custodian of our pure food rights. It has just issued a warning to the effect that egg powder should be powdered eggs, and that an egg substitute correctly labelled unless it possesses the properties of an egg.

At first blush one would think that our scientific friends were being a bit obvious. It sounds almost like a

Mother Goose rhyme, but "there's a reason." Only the housekeeper who has been tempted with mixtures of starch, a little white of egg, yellow coloring, and possibly some baking powder, and told that from these she could get the effect, the nutrition and the general delights of eggs in her cooking, at a small part of the cost, can realize how much this simple little ruling is needed.

The starch thickens, the baking powder lightens, the dye colors, and the egg white gives plausibility and character, but it isn't egg, nor even egg substitute, from the standpoints of quality and nutrition.

There is such a thing as a true powdered egg, and if bad eggs are excluded and the product is made in a sanitary way it is perfectly legitimate. Uncle Sam has been doing much special work to make this product a pure a 1 reliable one, saving in this form cracked eggs and the like which could not travel to market safely unless broken and dried or frozen.

Our food laws declare a food adulterated if any valuable constituent of the article has been wholly or in part extracted. When the housewife allows herself to be persuaded that she can use starch mixtures for egg she is busily engaged in adulterating her own home cooking, and when the baker does it for her "unbeknownst" the pocketbook as well as the stomach is defrauded.

Too many think that adulteration means only the adding of some positively injurious substance. To debase the food supply in any way, especially with accompanying misrepresentations as to quality and nutritive value, is adulteration.

The Supreme Court of the United States has ruled that even if you get a dollar's worth for your dollar the advertising is fraudulent if "the article is not of the character or kind represented and hence does not serve the pur-The ruling applied specifically to farm land in Florida, but it is based on such a fundamental principle that it applies equally well to egg substitutes in Maine which do not take the place of eggs, cream whips that have no butter fat, but are made of glucose and sugar and gum, or any other "just as good" food substitute which is not just as good either in taste or nourishing value.

Consider the egg-12 per cent of tissue building material, 9 per cent of fat, and no starch at all: moreover the nature of these ingredients is of even more importance than their quantity. Phosphorus, lime and iron, all vaunted in patent medicine advertising are here offered by nature in the form in which the body can best use them.

Have you heard the mystic words "lecithin" and "nuclein"? They are used to conjure with in some proprietary medical circles.

The hen has a limited vocabulary. She cannot advertise, but she gets all these into the egg, and a well-formed chicken ready for real life bears witness to the nutritive value of the egg substance. The fat in the yolk and the tissue building substances in the white are

present in the most digestible form known. Eggs and milk and fresh air are the consumptive's best ammunition in fighting death,

and for this subtle, life producing compound we are offered starch (an energy food only), artificial color and a little white of egg.

It is careless body bookkeeping to say, "It doesn't matter. We will make it up somewhere else." That is as may be. We do not know of anything that can efficiently substitute for the egg. Certainly not for the young nor for the old, nor for the invalid.

Why cheat ourselves, even if we are middleaged and well? Why not dietetic prevention instead of medicinal cure?

By all means a corn starch pudding when you want one. It is a good dessert, and starch is an important energy factor in the diet. But let us not put on a simple starch compound the burden of substituting for the subtle, complex and nutritious egg, with its body building powers. This is not a fair task. Let's eat eggs while we may. Now is the

THE LAST STRAW. T IS to be hoped that some of the

marvellous substitutes for real foods befamine stress will not survive when the dire necessity for them passes.

The last idea is to employ finely ground straw as an emergency nutrient ration. The scheme is to grind the material into a very fine powder so as to make it readily digestible. But what do you get after you have digested

A painstaking German scientist has tried this out on the patient pig. Trying it on the pig was giving the benefit of the doubt to the straw, as this animal is due to respond favorably to even the least desirable of foods.

But the pig certified that straw flour yielded only about one-twelfth of the available energy that could be obtained from the same amount of cereal, and, furthermore, the bulk of the ration increased the body activities so that there was an actual loss rather than a gain!

TO SERVE wisely and well three meals daily for three hundred and sixty-five days in the year is probably the most important duty that falls to the lot of the housekeeper. In the daily menus (published for one week in advance), which will appear each Sunday in The Tribune, special regard will be paid to the proper food values. As each and every dish has been carefully tested, even the inexperienced housewife need not hesitate to try them.

The greatest possible variety will be iven, with the introduction of many ew dishes that are well worthy of a trial. At the same time a due measure of economy will be practised, which should recommend the service to those housekeepers who must carefully consider their weekly budget.

In connection with the menu service I shall be very glad to answer personally any inquiries relative to the menus, provided a self-addressed stamped envelope is inclosed with the letter, addressed to me at the New York Tribune. York Tribune.

Suggestions for Planning the Menus.

Monday

In the arrangement of the menus

for the coming week the caterer will notice that the Tuesday, Wednesday, and Friday luncheons, as well as the breakfasts served on Monday and Saturday, have for their principal course an appetizing dish made from "left overs." Novel recipes for utilizing left overs will be a feature of the service. In the purchase of the joint for Wednesday, a forequarter of yearling lamb is suggested instead of the ing lamb is suggested instead of the more expensive leg. Served with a savory stuffing, the flavor and juicy tenderness of the meat is to be preferred to that of the leg, while the cost is considerably less. A chilled mint jelly to serve with it is a welcome change from the customary sauce. This may be moulded in an or-namental mould or individual ones as

preferred.

With the approach of warmer weather fish should appear frequently in the dieiary; its cost is considerably less than that of meat, and although the food value is not so high, when served with the accompaniments of potatoes, one other vegetable and a crisp, green salad, it furnishes a well-balanced meal containing all the needed food properties.

food properties.

I can recommend highly the desserts, into which fruit enters largely; also the hot breads, many of them Southern favorites

Tuesday

Meals All Planned for the Coming Week.

HESE menus are arranged with particular care as to the correct food values. a due measure of economy and the introduction of novel and tempting dishes not found in the average cook book.

All recipes have been tested by the writer,

VIRGINIA CARTER LEE.

some cereals may be more moist than others). Mix well and bake in a hot greased wafile iron. Serve as fast as they are baked.

Bluefish au Gratin. Free the left over bluefish from skin

Free the left over bluefish from skin and bones and flake into small particles. For each two cupfuls of the fish (seasoned lightly with salt and paprika) allow the following sauce: Melt in a saucepan one tablespoonful of butter, add one tablespoonful of flour and when thoroughly blended stir in very gradually one large cupful of milk. Stir constantly until the sauce thickens and boils and season with salt and pepper to taste, one tablespoonful of chopped parsley and one tablespoonful of mushroom catsup. Then add the fish and one chopped hard boiled egg, and when it reaches the building point turn into a buttered baking dish. Sprinkle the top thickly with crushed dried bread crumbs that have been mixed with an equal quantity of grated cheese and bake in a hot oven for fifteen minutes. Serve in the baking dish.

Coffee Bisque.

Scald a pint of milk in the upper part of the double boiler and stir in a

tiny pinch of salt, two squares of un-sweetened chocolate (grated) and three heaping tablespoonfuls of gran-ulated sugar. Cook, stirring fre-quently, until the mixture is smooth and the chocolate is melted. Remove from the fire, beat with an egg beater from the fire, beat with an egg beater and whip in the well-beaten white of one egg. Set aside and, when cold, add half a pint of chilled double cream that has been beaten solld and that has been sweetened with two even teaspoonfuls of powdered sugar and flavored with one teaspoonful of vanilla extract. Turn into the freezer and when about half frozen stir in one large cupful of crushed macaroon crumbs. Continue freezing until very smooth. Repack in a melon mould with a water-tight cover and bury in ice and rock salt for two or three hours to ripen. Serve unmoulded, accompanied by sweetened whipped cream.

"Impossible!"

Vegetable Chowder.

Cut two slices of salt perk into dice and fry slowly with two peeled and diced onions, four young carrots that have been scraped and cat into cubes, half of a turnip prepared in the same way and three stalks of chopped celery (do not brown the vegetables.) Then

Saturday

add half a can each of corn and tomatoes, two slices of minced green pepper (freed from seeds), salt to taste and one quart of cold water. Bring to a boil, cover the kettle closely and simmer for one hour. Have in readiness three polatoes that have been peeled and cut into dice and that have been parboiled for eight minutes. Add these, drained, to the chowder and cook until the potatoes are tender. Just previous to serving add two tablespoonfuls of chopped parsley and a cupful of broken crackers. Serva very hot.

Hot Banana Sandwiches.

This is a most delicious and eco nomical dessert and is especially good for the children's noontime luncheon. If there is a part of a loaf of brown bread left, slice it up and trim off the crusted edges. Butter the pieces liberally and make sandwiches of them, using sliced bananas and a little sugar for the filling. Lay the sandwiches in a buttered pan, arrange more sliced bananas on top and set in a hot oven until the fruit is soft. Serve either with plain cream or sweetened with plain cream or sweetened whipped cream. This dessert is so good that few will suspect that it is made from such homely ingredients.

Sunday

BREAKFAST. Uncooked Cereal with Strawberries.
Crisped Salt Pork in Cream Gravy.
Radishes.
Buttered Toast.
Coffee.

LUNCHEON OR SUPPER. Tomato Bouillon in Cups.
Scrambled Eggs with Asparagus Tips
(in the chaing dish).
Lettuce Sandwiches. Olives Fruit Jelly.

DINNER.

Thursday BREAKFAST.

Strained Orange Juice. Cooked Cereal. Creamed Finnan Haddie. Coffee.

LUNCHEON. * Clam Broth in Cups.
Curried Eggs. Kolls.
Warm Gingerbroad with Chocolate
Sauce.

Vegetable Chowder.
Cold Sliced Lamb, Chutney Sauce.
String Beans. Italian Macaroni.
Lemon Cocoanut Pie.

Friday BREAKFAST.

Moulded Cercal with Dates.
Spanish Omelet.
Bran Drops. Coffee.

Stuffed Green Peppers (last of the cold lamb). Potato Chips. Rye Gems. Hot Banana Sandwiches. DINNER.

Lamb Broth with Barley
(from lamb bones).

Baked Haddock with Savory Dressing.
Sweet Pickle.
Potato Puff. Buttered Beets.
Lettuce, French Dressing.
Tapico Ice.

BREAKFAST. Halved Grapefruit.
Corn Meal Mush.
Browned Fish Cutlets
(from left over haddock and dressing).
Popovers. Coffee. Popovers. Co LUNCHEON.

DINNER.

Braised For I with Mushrooms.
Corn Fritters.
Eiced Potatoes.
Vanilla Ice Cream with Cymel Sauce.

lirended Veal Cutlet. Tomato Gravy. Assurance. Crumed Potatoes. Watgries Sallid. Motor and Orange Sherhet.

Stewed Rhubarb with Figs.
Uncooked Cereal.

Baked Corned Beef Hash with Green
Peppers and Dropped Eggs.
Brown Bread Toust. Coffee. LUNCHEON.

Nauilion in Cups. Crackers. Crab West Salad in Tomatoes. Finger Rolls. Moths Layer Cake. DINNER.

BREAKFAST. BREAKFAST

Diced Pineapple.
Steamed Hominy.
Barbecued Ham. Radishes.
Maryland Beaten Biscuits.
Coffee. LUNCHEON. Veal Souffie (from last night's dinner). Stuffed Baked Potatoes.

Bread Sticks, Macedoine of Fruit. DINNER. Haived Graperuit with Cherries.

Planked Bluefish.

Parsley Pointoes. Staffed Tomatoes.

Cucumber Salad.

Tinsy Parson.

Wednesday BREAKFAST. Strawberries.

Fricassee of Chipped Beef. Cereal Waffles. Maple Syrup. Coffee. LUNCHEON.

Tested Recipes. Mint and Orange Sherbet.

Mint and Orange Sherbet.

Prepare a syrup from three cupfuls of water and two cupfuls of sugar. Cook for six minutes after it begins to beil, add half a bunch of bruised, fresh mint and one heaping teaspoonful of instant gelatine. Kemove from the fire as soon as the gelatine is dissolved and allow the strup to cool. Then add the juice of one lemon and three oranges and strain the mixture into a childed freezer. Pack with ice and rock salt and freeze very slowly. When the sherbet begins to congest, stir in the stiffly whipped whites of two eggs and half a cupful each of chopped creme de menthe cherries and candied orange peel. Freeze until firm and smooth and serve in small crystal sherbet cups.

Cereal Waffles.

Beat three eggs until light, add half teaspoonful of sait, half a cupful of any cooked cereal (free from lumps), half a small cupful of melted butter and two teaspoonfuls of baking powder sifted with sufficient flour to form a thin batter (the exact quantity of flour cannot be given, as the thickening properties of different makes vary and

Bluefish au Gratin (fish from last night's dinner). Vegetable Salad. Brown Bread Sandwiches. Rhubarb Turnovers. DINNER. Clear Tomato Soup.
Stuffed Fore-Quarter of Lamb.
Browned Potatoes. Mint Jelly.
Peas and Young Carrots.
Chicory Salad. Coffee Bisque.

Watercress.

LUNCHEON.

Broiled Kidneys with Bacon, Spinach Timbales, Pancakes with Jelly.

New England Boiled Dinner.
Corned Beet, Cabbage, Carrots and
Turnips
(prepared in the fireless cooker).
Potato Balls.
Romaine and Radish Salad.
Puff Puddings.